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PHOTONIC MEMS AND STRUCTURES

Abstract

An interference modulator (Imod) incorporates anti-reflection coatings and/or micro-fabricated supplemental lighting sources. An efficient drive scheme is provided for matrix addressed arrays of IMods or other micromechanical devices. An improved color scheme provides greater flexibility. Electronic hardware can be field reconfigured to accommodate different display formats and/or application functions. An IMod's electromechanical behavior can be decoupled from its optical behavior. An improved actuation means is provided, some one of which may be hidden from view. An IMOD or IMOD array is fabricated and used in conjunction with a MEMS switch or switch array. An IMOD can be used for optical switching and modulation. Some IMods incorporate 2-D and 3-D photonic structures. A variety of applications for the modulation of light are discussed. A MEMS manufacturing and packaging approach is provided based on a continuous web fed process. IMods can be used as test structures for the evaluation of residual stress in deposited materials.

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